

U.S. Patent No. 10/697,765
Response to Office Action of April 20, 2007

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of The Claims:

1. (currently amended) A method for separating a stack of sheets already formed from a stack being formed, during the production of paper packed products, comprising the steps of:

a) ~~formation of~~ forming a stack of interfolded sheets ~~that are piled~~ piling up on a table located underneath;

b) ~~separation of~~ separating two successive interfolded sheets once achieved a predetermined height of said forming stack being formed, ~~thus and~~ defining a completed stack and a forming stack being formed;

c) ~~said separation~~ separating occurring by lateral introduction of laterally introducing a first and a second separator into said stack being formed ~~and from opposite sides with respect to the stack same for separating the stack located underneath and for leaving at least one wing of sheet hanging free between said two separators~~;

d) moving away said completed stack of sheets from said table and leaving it on a conveyor belt or an outlet plane;

e) moving a sheet stretching board under the stack for all the stack width to suitable ~~for provisionally supporting the support said stack and for stretching said or each wing for all the stack width~~, with ~~a~~ an end portion of said wing of sheet eventually exceeding said sheet stretching board;

f) withdrawing said first and second separator up to reaching a position external to said stack being formed, and

g) moving back said table and withdrawing the sheet stretching board, with said portion of wing that remains between said stack and said table.

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2. (original) The method of Claim 1, wherein before moving back said table an element moving from a direction opposite to said sheet stretching board stretches said portion of wing of sheet exceeding said sheet stretching board.

3. (previously presented) The method of Claim 1, wherein a step is provided of making an end fold on the portion of said wing exceeding said sheet stretching board by means of both an element acting from the opposite side to said sheet stretching board and an element acting from the same side of said sheet stretching board, just before coming back said table.

4. (previously presented) The method of Claim 3, wherein said element acting from the same side is a blow of air, and said element acting from the opposite side of said sheet stretching board is said second separator, said separator moving from a position outer to the stack, after that said sheet stretching board is positioned, to a position below the lower face of said sheet stretching board and in order to make the end fold on the exceeding portion of sheet by said blow of air.

5. (original) The method of Claim 1, wherein previously to the step of moving away said completed stack on the conveyor belt, or in the outlet plane, a blow of air is provided for moving a possible last sheet that has remained in a vertical position bringing it to an horizontal position.

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6. (currently amended) An apparatus for separating a stack of sheets already formed from a stack being formed during the production of paper products in interfolded stacks, comprising:

- a) means for feeding said stack being formed with a stream of interfolded sheets;
- b) a movable table for supporting said stack being formed for allowing progressively the growth of the stack and for moving away the formed stack;
- c) a first and a second separator that are moved laterally into said stack and from opposite sides with respect to the stack same for separating the stack located underneath and to leave at least one wing of sheet hanging free between said two separators; and
- d) a sheet stretching board and means for moving said sheet stretching board under the stack for all the stack width to suitable for provisionally supporting the support said stack and for stretching said or each wing for all the stack width, with a-an end portion of said wing of sheet eventually exceeding said sheet stretching board.

7. (original) The apparatus of Claim 6, comprising, furthermore, an element moving from a direction opposite to said sheet stretching board, with respect to the processed stack, suitable for stretching said portion of wing of sheet exceeding said sheet stretching board just before coming back said table.

8. (original) The apparatus of Claim 6, wherein said element moving from the opposite side of said sheet stretching board is a blow of air.

9. (original) The apparatus of Claim 6, wherein said first and second separator are engaged to a support operatively coupled to a connecting rod operated by a motor; said connecting rod rotating by means of a cam and causing the rotation about a first and a second pivot of an articulated quadrilateral associated to a movable carriage along a sliding direction.

10. (original) The apparatus of Claim 6, wherein said sheet stretching board slides on a base integral to said support of said first separator in a direction orthogonal to said sliding direction operated by an actuator that causes it to move along this direction.

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11. (original) The apparatus of Claim 6, wherein said table is located on a slide movable horizontally along a guide operated by an actuator.

12. (currently amended) A method for separating a stack of sheets already formed from a stack being formed, during the production of paper packed products, comprising the steps of:

a) ~~formation of forming~~ a stack of interfolded sheets ~~that are piled piling up~~ on a table located underneath;

b) ~~separation of separating~~ two successive interfolded sheets once achieved a predetermined height of said ~~forming stack being formed, thus and~~ defining a completed stack and a ~~forming stack-being formed~~;

c) ~~said separation-separating~~ occurring by ~~lateral introduction of~~ laterally introducing a first and a second separator into ~~said a forming stack being formed and~~ from opposite sides with respect to the forming stack same for separating the stack located underneath, ~~the a forming stack having a width and the introducing two separators being introduced in the stack for about half the width bearing together the stack being formed, the two separators leaving-leaving~~ at least one wing of sheet hanging free between said two separators, the two separators leaving the wing hanging at about half of the width;

d) moving away said completed stack of sheets from said table and leaving it on a conveyor belt or an outlet plane;

e) moving a sheet stretching board under the stack for all the stack width to suitable ~~for provisionally supporting the support said stack and for stretching said or each wing for all the stack width, with a-an end portion of said wing of sheet eventually exceeding said sheet stretching board~~;

f) withdrawing said first and second separator up to reaching a position external to said stack being formed, and

g) moving back said table and withdrawing the sheet stretching board, with said portion of wing that remains between said stack and said table.